

# **GUJARAT TECHNOLOGICAL UNIVERSITY**

## **M.E. Computer Engineering (IT Systems and Network Security)**

### **Semester: I**

Subject Name: **Distributed Computing (Elective I & II- Group 1)**

Subject Code: **715105**

#### **Course Content:**

Characterization of Distributed Systems, Resource sharing and the web, Challenges arising from the construction of distributed systems, System Models, Networking and Internetworking, Interprocess Communication, The API for the internet protocols, External data representation and marshalling, Client-server communication Group communication, Distributed Objects and Remote Invocation, Operating System Support, The operating System layer, Protection, Processes and threads , Communication and invocation, Operating system architecture Time and Global States, Clocks, events and process states, Synchronizing physical clocks, Logical time and logical clocks, Global states, Distributed Debugging, Case studies: Ethernet, WiFi, Bluetooth and ATM  
Case study: interprocess communication

#### **Text Book:**

1. Elements Of Distributed Computing,By Garg, John Wiley & Sons (sea) P Ltd (wie)

#### **Reference Book:**

1. Distributed Computing by Sunita Mahajan, Seema Shah, Paperback